

1 CLAIM LISTING

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3 1. (Currently Amended) A method of designing a logic circuit to provide a predetermined
4 logical operation, the method including the steps of:

5 (a) defining a logic synthesis block comprising a single dynamic logic circuit;

6 (b) performing logic synthesis for the predetermined logical operation to produce an
7 intermediate circuit, the logic synthesis being performed utilizing a synthesis
8 library constrained to the logic synthesis block;

9 (c) eliminating unused devices in the intermediate circuit to produce a final circuit;
10 and
11 (d) sizing the devices in the final circuit.

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13 2. (Original) The method of Claim 1 wherein the step of defining the logic synthesis block
14 includes selecting the largest practical dynamic AND/OR circuit for the integrated circuit
15 fabrication technology in which the circuit is to be implemented.

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17 3. (Original) The method of Claim 2 wherein the logic synthesis block comprises a four
18 high and four wide dynamic AND/OR circuit.

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20 4. (Original) The method of Claim 1 wherein the step of performing logic synthesis
21 includes leaving the size of the devices in the logic synthesis block substantially
22 unconstrained.

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1 5. (Original) The method of Claim 1 wherein the step of eliminating unused devices from
2 the intermediate circuit includes detecting devices having a state that remains constant as
3 the intermediate circuit operates to provide the predetermined logical operation.

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5 6. (Original) The method of Claim 1 wherein the step of sizing the devices in the final
6 circuit includes analyzing the final circuit to determine the characteristics of each device
7 in the final circuit necessary in order to consistently provide the predetermined logical
8 operation and meet drive requirements.

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10 7. (Original) The method of Claim 1 wherein the logic synthesis block uses a single
11 activation/reset clock signal.

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13 8. (Currently Amended) A method of synthesizing a logic circuit to provide a
14 predetermined logical operation, the method including the steps of:
15 (a) defining a logic synthesis block comprising a single dynamic logic circuit; and
16 (b) performing logic synthesis for the predetermined logical operation to produce an
17 intermediate circuit, the logic synthesis utilizing a synthesis library constrained to
18 the single dynamic logic circuit comprising the logic synthesis block.

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20 9. (Original) The method of Claim 8 wherein the step of defining the logic synthesis block
21 includes selecting the largest practical dynamic AND/OR circuit for the fabrication
22 technology in which the circuit for performing the predetermined logical operation is to
23 be implemented.

- 1 10. (Original) The method of Claim 8 wherein the logic synthesis block comprises a four
- 2 high and four wide dynamic AND/OR circuit.
- 3
- 4 11. (Original) The method of Claim 8 wherein the step of performing logic synthesis for the
- 5 predetermined logical operation includes leaving device size in the logic synthesis block
- 6 substantially unconstrained.
- 7
- 8 12. (Original) The method of Claim 8 wherein the dynamic logic circuit comprising the logic
- 9 synthesis block operates using a single activation/reset clock signal.
- 10
- 11 13. (Currently Amended) In a circuit design method utilizing a logic synthesis tool and
- 12 predefined logic circuit library to provide a logic implementation for a predetermined
- 13 logical operation, the improvement comprising:
 - 14 (a) defining a logic synthesis block comprising a single dynamic logic circuit; and
 - 15 (b) constraining the logic synthesis tool to the logic synthesis block.
- 16
- 17 14. (Original) The method of Claim 13 wherein the logic synthesis tool produces an
- 18 intermediate circuit design which performs the predetermined logical operation, and
- 19 further including the steps of:
 - 20 (a) eliminating unused devices in the intermediate circuit design to produce a final
 - 21 circuit; and
 - 22 (b) sizing the devices in the final circuit.
- 23

- 1 15. (Original) The method of Claim 13 wherein the step of defining the logic synthesis block
- 2 includes selecting the largest practical dynamic AND/OR circuit for the circuit fabrication
- 3 technology in which the circuit design is to be implemented.
- 4
- 5 16. (Original) The method of Claim 13 wherein the logic synthesis block comprises a four
- 6 high and four wide dynamic AND/OR circuit.
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- 8 17. (Original) The method of Claim 13 further including the step of leaving the device size
- 9 in the logic synthesis block substantially unconstrained for the logic synthesis tool.
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- 11 18. (Original) The method of Claim 13 wherein the logic synthesis block uses a single
- 12 activation/reset clock input.